

REMARKS

Favorable reconsideration is respectfully requested in light of the above amendments and the following comments. The claims have been amended to better describe the invention. New claims 41-43 have been added to round out the potential scope of protection. No new matter has been added, as these amendments are fully supported in the originally filed application.

The Examiner has objected to claims 7, 10-20 and 34 due to several alleged informalities. The claims have been appropriately amended, thereby resolving the alleged informalities.

Prior to addressing the individual art rejections, Applicants would like to generally discuss the invention. One purpose of the invention is to quickly and accurately determine the optimal position of an optical fiber relative to a collimation lens, or to determine the optimal distance between the optical fiber and the collimation lens. Another purpose of the invention is to test or evaluate whether an optical fiber of an optical collimator is optimally aligned or is placed the optimal distance from a collimation lens of the optical collimator. In order to facilitate said determination or said testing, it can be useful to quickly find the optimal relative position between the optical collimator and an optical element.

Accordingly, one feature of the claimed invention is to measure the intensity of light passing through the optical collimator, which is to be aligned or tested, while moving the optical member and/or the optical collimator. This feature shortens time to find the optimal relative position between the optical collimator and the optical element, thereby reducing time to test the optical collimator or to determine the optimal distance of the optical fiber from the collimation lens. None of the references teach or suggest of measuring the intensity of light passing through the optical collimator while moving the optical collimator and/or the optical member in different scan directions at different scan speeds.

Applicants respectfully traverse the Examiner's rejection of claims 7, 10, 11, 13-15, 17-19, 22-26, 30-32, 34 and 39 under 35 U.S.C. § 103(a) as unpatentable over Cowen et al., U.S. Patent No. 4,509,827. The Examiner is apparently making this rejection in combination with the web page printouts from www.oriel.com, as while Cowen et al. cite the Model 1435 Laser Cavity Mirror Mount at column 4, lines 39-42, they do not in fact expressly incorporate it by reference. Applicants note as well that the Examiner has provided no evidence that the product

described in the archival web site printouts of February 14, 2001 is identical to the product referenced in the Cowen et al. patent application filed some eight years earlier.

Cowen et al. disclose adjusting the tilt angle of a mirror 27 (or the relative position of the mirror 27 relative to a bushing 20 having a bore 21) in an autocollimating step 53. However, it appears that the autocollimating step 53 taught by Cowen et al. is performed without placing an optical collimator in the bore 21. The mirror 27 is fixed at the adjusted tilt angle when completing the autocollimating step 53 (column 4, lines 42-44). After the autocollimating step 53, an optical collimator (a ferrule 30, a lens 45, and an optical fiber 40) is placed in the bushing 20. Thereafter the position of the optical collimator is adjusted using the mirror 27 without changing the adjusted tilt angle of the mirror 27.

As discussed, Cowen et al. teach only of measuring the intensity of light that passes through the bore 21 where no optical collimator is placed. Therefore, it appears that Cowen et al. fail to describe or suggest measuring the intensity of light passing through an optical collimator while moving the optical collimator and/or an optical member in different scan directions at different scan speeds. This feature is included in every independent claim (and by extension, in every dependent claim). Thus, Cowen et al. fail to disclose or suggest a claimed limitation. As one of the necessary components of a *prima facie* obviousness rejection is that the reference or combination of references disclose each and every claimed limitation, Applicants assert that for at least this reason, the pending rejection is flawed and should be withdrawn.

Moreover, the claimed invention requires reciprocal rotation of either the mirror or the optical collimator about first and second axes that are both orthogonal to an optical axis. Applicants do not believe that the Allen wrench adjustments disclosed in the cited web page printout equate to reciprocal rotation. In particular, such adjustments do not appear equivalent to the claimed requirement that reciprocal rotation about a first axis occur simultaneously with reciprocal rotation about a second axis. Indeed, that the Examiner relies (incorrectly, as will be discussed) upon a secondary reference in a subsequent rejection to suggest inclusion of the previously claimed simultaneous movement would seem to indicate that the Examiner herself recognizes that Cowen et al. are silent as to this feature.

Again, the asserted combination of Cowen et al. with the aforementioned archived web page printout fails to disclose every claimed limitation. Thus, the rejection is flawed and should be withdrawn.

Further, independent claims 9, 22, 23 and 28 (and consequently the claims depending therefrom) additionally require reciprocally sliding one of the optical elements (such as an optical collimator) at a third speed along the first axis while simultaneously sliding the optical element at a fourth speed along the second axis. This additional movement is another claimed element not taught by Cowen et al. Favorable reconsideration is respectfully requested.

Applicants respectfully traverse the Examiner's rejection of claims 12 and 33 under 35 U.S.C. § 103(a) as unpatentable over Cowen et al., U.S. Patent No. 4,509,827, in view of Palen et al., U.S. Patent No. 6,205,266. Cowen et al. are distinguished above as failing to teach the invention as recited in claims 7 and 31 (from which claims 12 and 33, respectively, depend). Palen et al. is relied upon by the Examiner to suggest the claimed movement. However, Palen et al. fail to describe reciprocal rotation of an optical element such as a mirror or an optical collimator around a first axis simultaneously with reciprocal rotation of the optical element around a second axis that is orthogonal to the first axis. Thus, Palen et al. fail to remedy the noted shortcomings of Cowen et al. Therefore, the rejection is flawed and should be withdrawn. Favorable reconsideration is respectfully requested.

Applicants respectfully traverse the Examiner's rejection of claims 16, 20 and 28 under 35 U.S.C. § 103(a) as unpatentable over Cowen et al., U.S. Patent No. 4,509,827, in view of Francis, U.S. Patent No. 6,168,319. Cowen et al. is distinguished above as failing to teach the invention as recited in claims 13 and 17 (from which claims 16 and 20, respectively, depend from). Claim 28 has been amended to require reciprocal rotation of either the optical element or the optical collimator about first and second axes that are both orthogonal to an optical axis. As previously discussed, Cowen et al. fail to describe this limitation. However, Francis neither suggests nor teaches of measuring the intensity of light passing through an optical collimator while moving the optical collimator and/or an optical member in different scan directions at different scan speeds. Therefore, Francis fails to remedy the noted shortcomings of Cowen et al., and thus the rejection is flawed and should be withdrawn. Favorable reconsideration is respectfully requested.

Applicants respectfully traverse the Examiner's rejection of claims 9, 13-20, 22-25, 27-28, 30, 35, 37, 38 and 40 under 35 U.S.C. § 103(a) as unpatentable over Bergmann et al., U.S. Patent No. 6,374,012. Bergmann et al. disclose sliding an optical collimator in two directions. However, Bergmann et al. do not teach rotating the optical collimator in different scan directions at different scan speeds. Further, Bergmann et al. neither suggest nor teach measuring the intensity of light passing through the optical collimator while moving the optical collimator and/or an optical member in different scan directions at different scan speeds. Thus, Bergmann et al. cannot be considered as teaching the invention. Favorable reconsideration is respectfully requested.

Applicants respectfully traverse the Examiner's rejection of claim 36 under 35 U.S.C. § 103(a) as unpatentable over Bergmann et al., U.S. Patent No. 6,374,012, in view of Kiryuscheva et al., U.S. Patent No. 5,859,947. Claim 36 has been canceled, thereby rendering the rejection moot. Applicants do not concede the correctness of the rejection. Favorable reconsideration is respectfully requested.

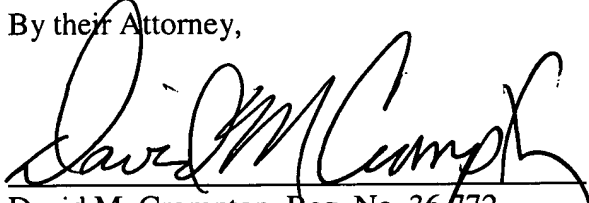
Reexamination and reconsideration are respectfully requested. It is respectfully submitted that all pending claims are now in condition for allowance. Issuance of a Notice of Allowance in due course is requested. If a telephone conference might be of assistance, please contact the undersigned attorney at (612) 677-9050.

Respectfully submitted,

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By their Attorney,

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